



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

\$

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,721	03/16/2004	Hiromichi Tsugami	Q80422	1030
23373	7590	09/07/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			CASTRO, ARNOLD	
			ART UNIT	PAPER NUMBER
			3747	

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/800,721	<b>Applicant(s)</b> TSUGAMI ET AL.	
	<b>Examiner</b> Arnold Castro	<b>Art Unit</b> 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The term "module" in claim 2 is a term which renders the claim indefinite. The term "module" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Module e.g. unit of measure is claimed in a range from .4 to 1.0. However, the claim and/or specification does not entail how these measurements are arrived, no units are claimed or described. Is the module a ratio of diameter to thickness? Perhaps, applicant is attempting to claim a module between input and output gears e.g. gear ratio? The claim implies that this module is interrelated with number of teeth but the examiner cannot determine what the relation is from the specification, claims, or drawings. The search of prior art did not result in the use of "module" as a common term unit in the art.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 3747

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al. (JP 06033804 A) in view of Kamimura et al. (US/5,868,114).

6. Kanazawa et al. discloses in embodiment shown in figure 2 a throttle valve comprising: an intake throttle valve including a valve housing (201), a valve shaft (121) rotatably supported within said valve housing and a valve element (102) fixedly mounted on said valve shaft for changing an opening area of an intake passage formed internally of said valve housing, a reduction gear mechanism (103) operatively coupled to said intake throttle valve, and a driving motor operatively coupled to said reduction gear mechanism so that a driving force of said driving motor is transmitted to said valve shaft through the medium of said reduction gear mechanism for thereby changing said opening area of said intake passage through rotation of said valve element, wherein said reduction gear mechanism is composed of an output gear fixedly secured to a **shaft of an electromagnetic clutch (110) operatively connected to motor output shaft** and an input gear fixedly secured to said valve shaft at one end thereof and directly meshing with said output gear. In reference to claim 2, as best understood Kanazawa has the same range of "module" as claimed since arrangement is identical to applicant's arrangement. In regards to claim 5, the out put gear is disclosed as secured to shaft it would be obvious to one of ordinary skill in the art to secure the gear to shaft via any means know in the art such as press-fitting, molding, gluing, welding, clipping with key, screwing etc. The method of securing is an obvious matter of design choice

Art Unit: 3747

the specification does not point to any particular benefit to the use of press fitting over any other known methods of securing.

In regards to claim 7, wherein it is claimed the throttle valve apparatus is designed to be installed on a gasoline engine car whose cylinder volume is 1.0 liter or less. The throttle valve of Kanazawa et al. discloses it is for use in a car as is applicant's invention. Conventional automobile engines range from 7.4 liters to 1.5 liters. when divided by number of cylinders the cylinder volumes fall in a range from 0.925 to .375 liters all under 1 liter. Therefore, the throttle valve of Kanazawa et al. was inherently designed for 1.0 liter or less cylinder volume.

It is has been held that omission of an element and its function is obvious If the function of the element is not desired. Ex parte Wu , 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989) See also In re Larson, 340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious if this feature was not desired.); and In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating its function was an obvious expedient).

Therefore, it would be obvious to remove the electromagnetic clutch and mount the output gear to shaft of motor. As evidence of this obviousness Kamimura et al. is introduced.

Kamimura et al. discloses a throttle valve similarly arranged as the valve of Kanazawa et al but having an intermediate gear in the gear train. Kamimura et al

Art Unit: 3747

disclosed two embodiments of invention shown in figures 1 and 2, with the difference being an **electromagnetic clutch (14)**.

Therefore, at the time of invention it would have been obvious for one of ordinary skill in the art to delete the electromagnetic clutch (110) shown in Kanazawa et al. as stated in case law. Ex parte Wu , 10 USPQ 2031 and explicitly shown in Kamimura. The deletion of the electromagnetic clutch results in the claimed invention.

Motivation to delete the electromagnetic clutch would have been to improve reliability and/or reduce cost.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al. (JP 06033804 A) in view of Kamimura et al. (US/5,868,114). as applied to claim 1 above, and further in view of Makino et al. (US/4,690,119).

Makino et al. discloses a valve apparatus wherein the output gear is fabricated through a sintering process see column 3, lines 42-52.

At the time of invention it would have been obvious to make the output gear of throttle valve of Kanazawa et al. (JP 06033804 A) in view of Kamimura et al. (US/5,868,114). as applied to claim 1 above out of sintering process as shown in Makino et al.

Motivation to do so is given in Makino et al., that is to allow the device to operate smoothly with no supply of an lubricating oil.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al. (JP 06033804 A) in view of Kamimura et al. (US/5,868,114). as applied to claim 1 above, and further in view of Torii et al. (US/6,626,421)

Torii et al. discloses an electrical throttle control valve wherein the housing is made of resin. See figure 8, column 9, lines 35-44.

At the time of invention it would have been obvious to make the housing of Kanazawa et al. (JP 06033804 A) in view of Kamimura et al. (US/5,868,114) throttle valve out of resin as taught by Torii et al.

Motivation to do so is given in Torii et al. that is to decrease the weight and cost of the valve.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnold Castro whose telephone number is (703) 305-0039. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuen Henry can be reached on (703) 308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 3747

A handwritten signature in black ink, appearing to read 'Arnold Castro', with a long horizontal flourish extending to the right.

Arnold Castro  
Examiner  
Art Unit 3747

AC